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MR# 338361

The Dow Chemical Company  
Midland, MI 48674  
SA

1803 BUILDING

September 21, 2011

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(Attn: TSCA Section 8(e) Coordinator)  
Office of Pollution Prevention and Toxics  
Environmental Protection Agency  
1201 Constitution Avenue, NW  
Washington, DC 20004-3302



Re: Ethylene Oxide  
CASRN: 75-21-8

Dear Sir/Madam:

The following information is being submitted by The Dow Chemical Company (Dow) pursuant to current guidance issued by EPA indicating EPA's interpretation of Section 8(e) of the Toxic Substances Control Act. Dow has made no determination as to whether a significant risk of injury to health or the environment is actually presented by the findings.

Male mice were exposed to 10, 50, 100 and 200 ppm ethylene oxide for 4, 8, or 12 weeks. Lungs of the mice have been observed for gene mutations, specifically codon 12 of the K-ras oncogene. Following preliminary analysis of tissues from the 4 week exposure group, a significant increase in the frequency of GGT→GTT mutations was observed at 10ppm, 50ppm and 100ppm but not at the 200ppm exposure level.

K-ras codon 12 GTT mutation was observed previously in 21/23 lung tumors from male B6C3F<sub>1</sub> mice exposed to 50 or 100 ppm EO (five days/week for two years).

Questions may be addressed to the undersigned.

Sincerely,

*Alicia M Fitzpatrick*

Alicia M. Fitzpatrick  
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FAX: 215-785-7227  
E-MAIL: [afitzpatrick@dow.com](mailto:afitzpatrick@dow.com)



CONTAINS NO CBI

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Beth Stieve

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The Dow Chemical Company  
1803 BLDG  
Midland, MI 48674



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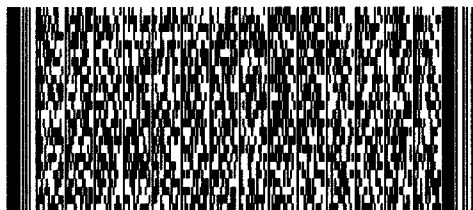


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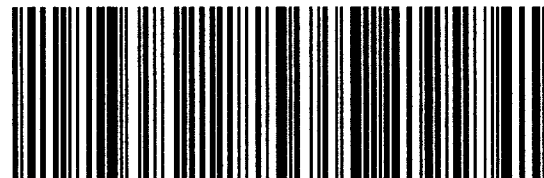
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